

### ■ Features

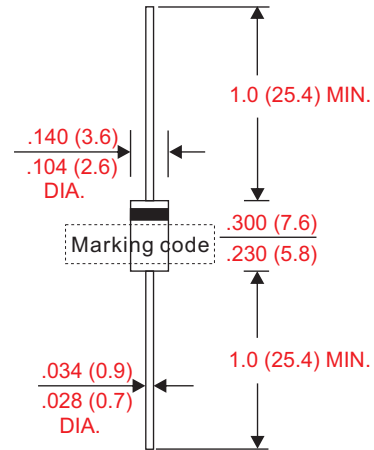
- Axial lead type devices for through hole design.
- High current capability.
- Fast switching for high efficiency.
- High surge current capability.
- Glass passivated chip junction.
- Suffix "G" indicates Halogen free parts, ex. FR1505G
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

### ■ Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, DO-204AC / DO-15
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity : Color band denotes cathode end
- Weight : Approximated 0.39 gram

### ■ Outline

DO-15(DO-204AC)



Dimensions in inches and (millimeters)

### ■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	0.375"(9.5mm) lead length at $T_A = 75^\circ\text{C}$	$I_O$			1.5	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$			50	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	$I_R$			5.0	uA
	$V_R = V_{RRM}$ $T_A = 125^\circ\text{C}$				100	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		50		$^\circ\text{C/W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		30		pF
Storage temperature		$T_{STG}$	-55		+150	$^\circ\text{C}$

Symbol	Marking code	Max. repetitive peak reverse voltage $V_{RRM}$ (V)	Max. RMS voltage $V_{RMS}$ (V)	Max. DC blocking voltage $V_R$ (V)	Max. forward voltage @1.5A, $T_A = 25^\circ\text{C}$ $V_F$ (V)	Max. reverse recovery time(1) $T_{rr}$ (ns)	Operating temperature $T_J$ ( $^\circ\text{C}$ )
FR1505	FR1505	50	35	50	1.30	150	-55 ~ +150
FR151	FR151	100	70	100			
FR152	FR152	200	140	200			
FR154	FR154	400	280	400		250	
FR156	FR156	600	420	600			
FR158	FR158	800	560	800		500	
FR1510	FR1510	1000	700	1000			

Note : 1.  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$

■ Rating and characteristic curves

Fig. 1 - Forward Current Derating Curve

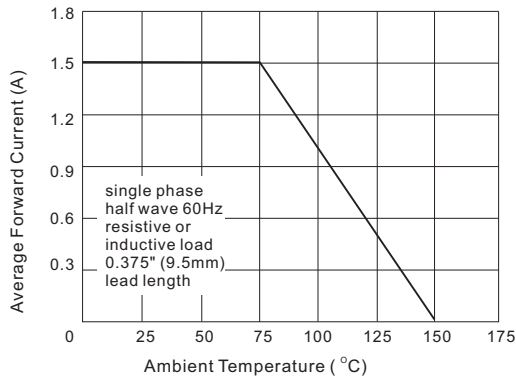


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

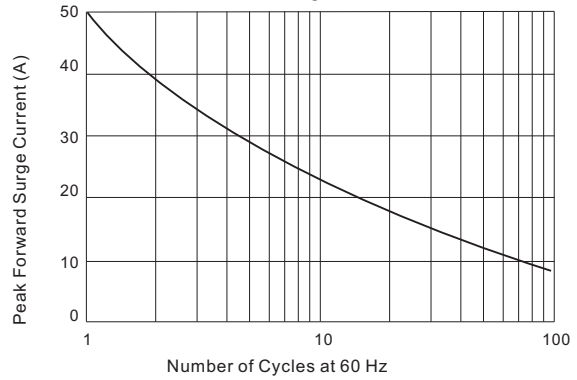


Fig. 3 - Typical Instantaneous Forward Characteristics

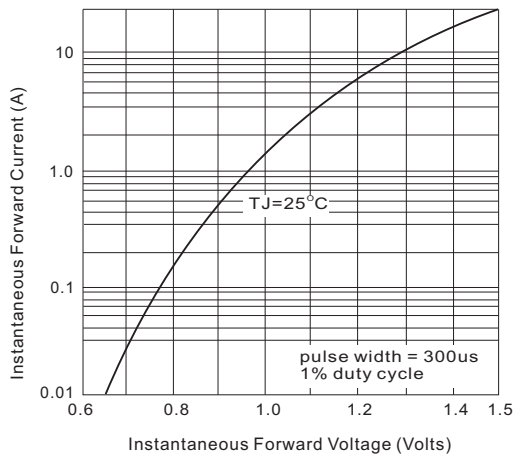


Fig. 4 - Typical Reverse Characteristics

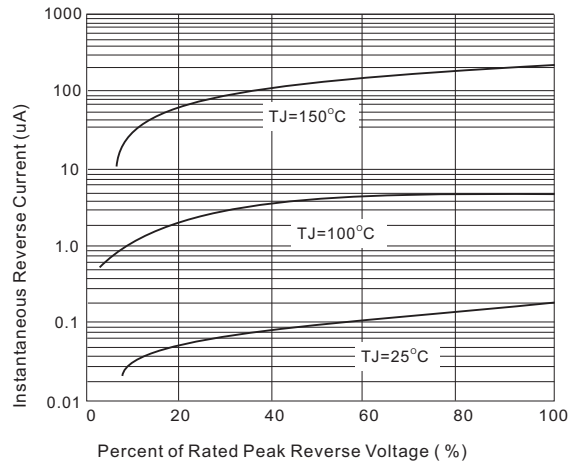
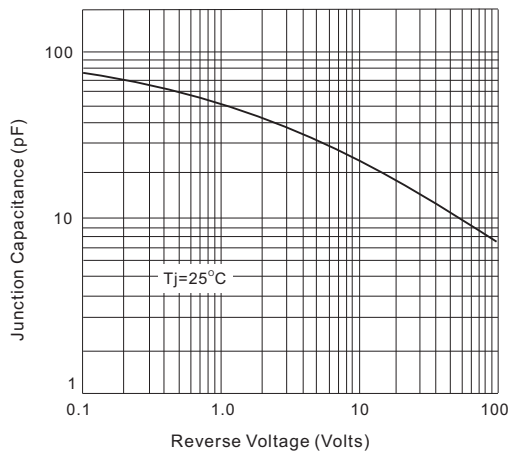


Fig. 5 - Typical Junction Capacitance



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